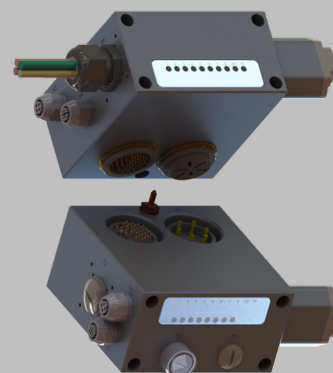# XCHANGE™ Utility Module
Heavy Duty Electrical Modules - Communications

Electrical Modules pass electrical signals during an automatic tool changing operation.

Advantages:
- Flexible Connection Options
- Aluminum construction to reduce electrical noise
- Low-Profile to minimize end effector height
- Replacement probes for fast and easy maintenance
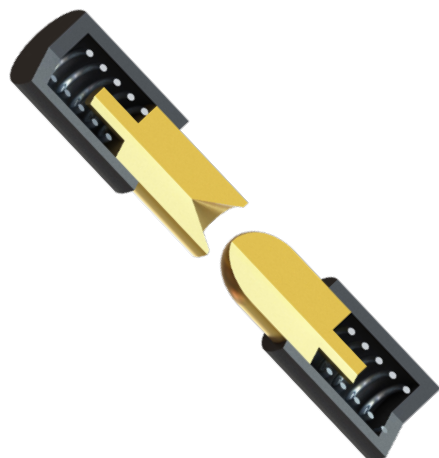- Additional feedback passthru is optional

SPECIFICATIONS

Model	Description	User Connection	Rated Current A	Rated Voltage V (AC/DC)	Couple/Uncouple Sensor Interface	Weight** kg (lb)
E-R-EIP-M12-4.25/4.05-P-015-TSM	Robot Adaptor - Ethernet/IP and/or Profinet	7/8 4 PIN M12 4 PIN D-CODED	10 4	600 48/60	Yes	1.55 (3.41)
E-T-EIP-M12-4.25/4.05-015-TSM	Tool Adaptor - Ethernet/IP and/or Profinet	7/8 4 SOC M12 4 PIN D-CODED	10 4	600 48/60	N/A	1.70 (3.74)
E-R-PN-M12-5.25/4.05-P-015-TSM	Robot Adaptor - Ethernet/IP and/or Profinet	7/8 5 PIN M12 4 PIN D-CODED	4 4	300 48/60	Yes	1.55 (3.41)
E-T-PN-M12-5.25/4.05-015-TSM	Tool Adaptor - Ethernet/IP and/or Profinet	7/8 5 SOC M12 4 PIN D-CODED	4 4	300 48/60	N/A	1.70 (3.74)
E-R-PN-PP-5.25/4.05-P-015-TSM	Robot Adaptor - Profinet - Push/Pull Connections	Push/Pull 5 PIN Push/Pull RJ45 10 PIN	16 1.75	400 48	Yes	1.55 (3.41)
E-T-PN-PP-5.25/4.05-015-TSM	Tool Adaptor - Profinet - Push/Pull Connections	Push/Pull 5 PIN Push/Pull RJ45 10 PIN	16 1.75	400 48	N/A	1.70 (3.74)
E-R-PN-M12-L5.25/4.05-P-015-TSM	Robot Adaptor - Profinet - M12 Connections	M12 5 PIN L-CODED M12 4 PIN D-CODED	16 4	63 48/60	Yes	1.55 (3.41)
E-T-PN-M12-L5.25/4.05-015-TSM	Tool Adaptor - Profinet - M12 Connections	M12 5 SOC L-CODED M12 4 SOC D-CODED	16 4	63 48/60	N/A	1.70 (3.74)
E-R-DN-7/8-8.25/1.05-P-015-TSM	Robot Adaptor - DeviceNet	7/8 4 PIN 7/8 5 PIN	4 4	250 300	Yes	1.55 (3.41)
E-T-DN-7/8-8.25/1.05-015-TSM	Tool Adaptor - DeviceNet	7/8 4 SOC 7/8 5 SOC	4 4	250 300	N/A	1.70 (3.74)

* All modules include Couple/Uncouple Sensor Interface, TSM and Tool ID. All modules have SCM counterpart versions available
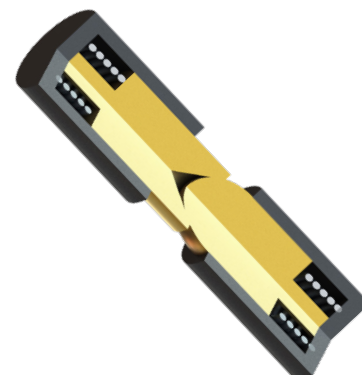** Module weight may vary depending on specific configuration.

Operating Temperature: **5 - 60 °C (40 – 140 °F)**
Noise Emissions (Sound Pressure): **≤ 70 dB(A) in any direction**

CONTACT PROBE TECHNOLOGY

Applied Robotics XCHANGE™ electrical modules use spring loaded contact probes for their many benefits:
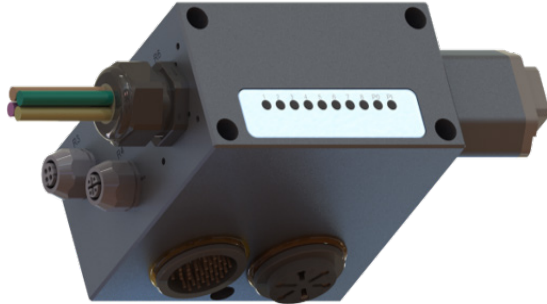- Low contact resistance
- High mating cycles
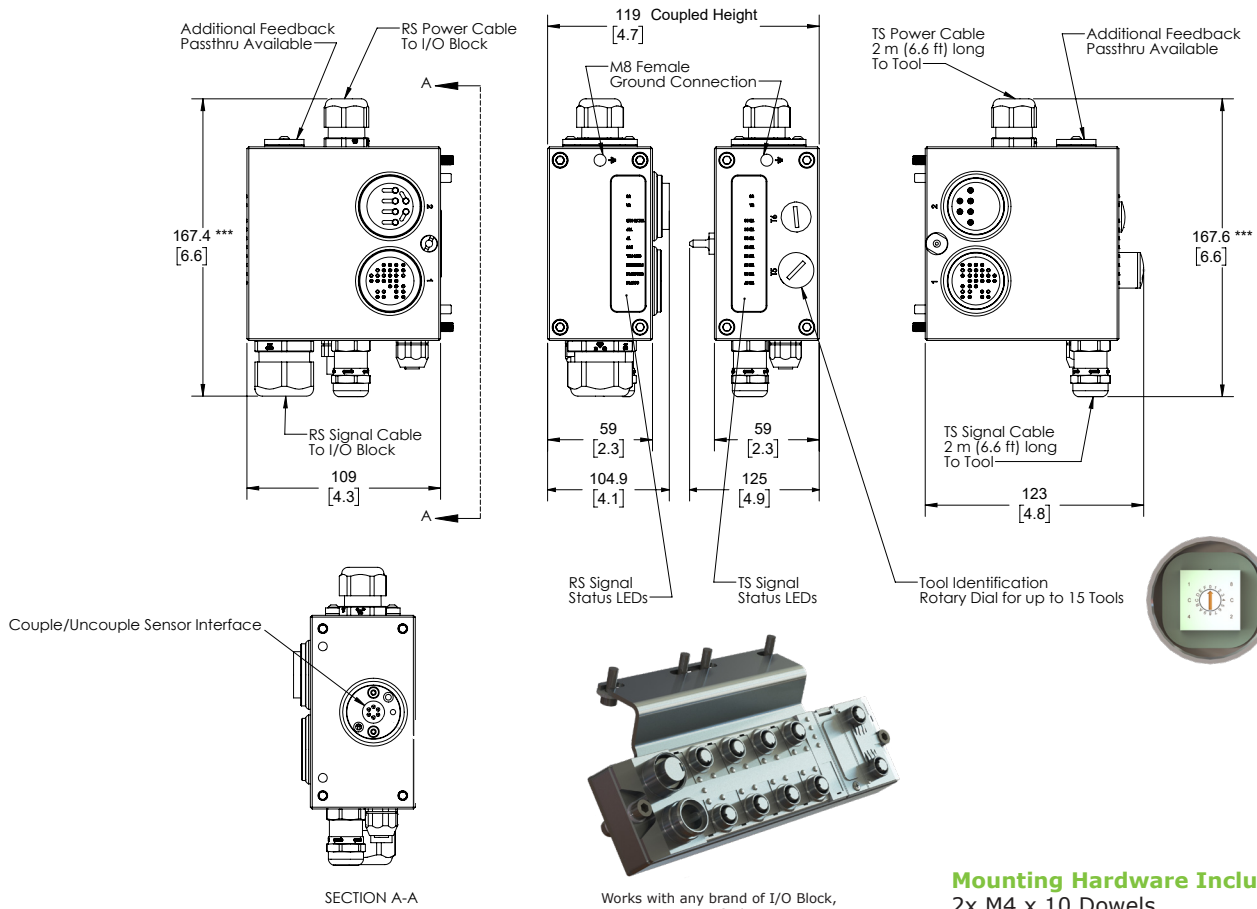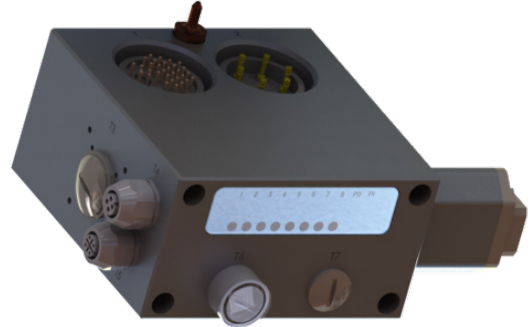- Limited debris buildup
- Minimal maintenance

* Images are visual representations only.

Applied Robotics™
Solutions in reach

ROBOT ADAPTOR MODULE

TOOL ADAPTOR MODULE

Additional Feedback Passthru Available

RS Power Cable To I/O Block

119 Coupled Height [4.7]

M8 Female Ground Connection

TS Power Cable 2 m (6.6 ft) long To Tool

Additional Feedback Passthru Available

167.4 *** [6.6]

167.6 *** [6.6]

RS Signal Cable To I/O Block

59 [2.3]

59 [2.3]

TS Signal Cable 2 m (6.6 ft) long To Tool

109 [4.3]

104.9 [4.1]

125 [4.9]

123 [4.8]

RS Signal Status LEDs

TS Signal Status LEDs

Tool Identification Rotary Dial for up to 15 Tools

Couple/Uncouple Sensor Interface

SECTION A-A

Works with any brand of I/O Block, containing specified connection.

Mounting Hardware Included:
2x M4 x 10 Dowels
4x M4 x 16 SHCS

* Dimensions are in millimeters (inches).
** All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification.
*** Dimensions to the end of the Strain Relief. Cable is not included in measurement.